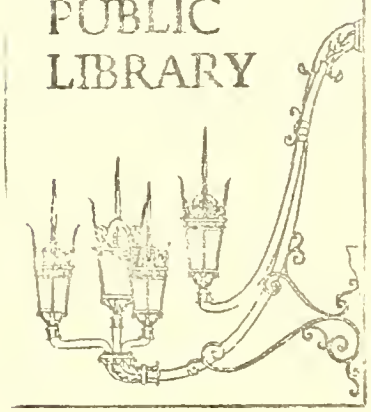
BOSTON
PUBLIC
LIBRARY

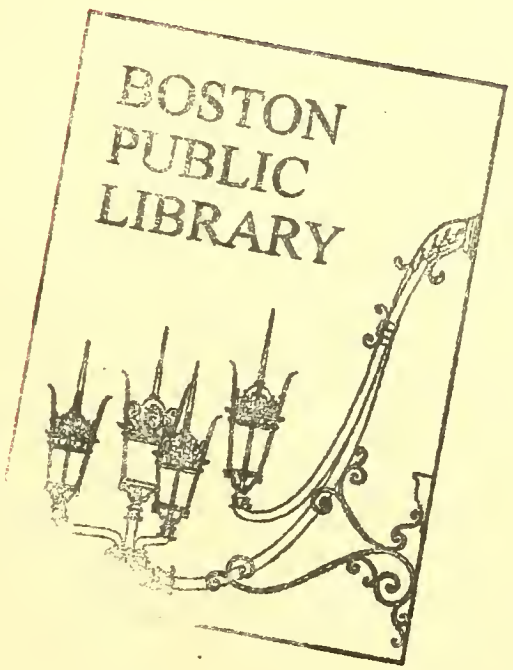


BRA
1724

STAFF DRAFT
FOR
REVIEW ONLY

SOUTH BOSTON SEAPORT ACCESS ROAD

PRELIMINARY PLAN PROPOSAL AND FEASIBILITY STUDY



Prepared by:

BOSTON REDEVELOPMENT AUTHORITY

OCTOBER, 1974

TABLE OF CONTENTS

REPORT SUMMARY

Chapter

1. SEAPORT ACCESS ROAD: CIRCULATION PLAN REQUIREMENTS

   Introduction

   Objectives

   The Concept

   Traffic Volumes and Existing Facilities

   Economic Development and Future Transportation Needs

   Residential Impact and Disturbance

   Related Project Improvements

2. EVALUATION OF ALTERNATIVES FOR PROPOSED SEAPORT ACCESS ROAD SYSTEM

   ALTERNATIVE "A"

   Route Profile

   Principal Roadway Characteristics

   Service Characteristics

   Land Acquisition and Demolition

   Relocation Requirements

   Community and Environmental Impact

   Development Cost

   Summary Evaluation

TABLE OF CONTENTS

ALTERNATIVE "B"

Route Profile

Principal Roadway Characteristics

Service Characteristics

Land Acquisition and Demolition

Relocation Requirements

Community and Environmental Impact

Development Cost

Summary Evaluation

ALTERNATIVE "C"

Route Profile

Principal Roadway Characteristics

Service Characteristics

Land Acquisition and Demolition

Relocation Requirements

Community and Environmental Impact

Development Cost

Summary Evaluation

3. FUTURE ACTION RECOMMENDATIONS

Selection of an Alternative

Financing a Feasibility Study

Agency Involvement

Community Participation

LIST OF FIGURES

1. Land Use and Vicinity Map
2. 1963 Origins and Destinations Data For South Boston
3. 1973 Estimated Average Daily Traffic
4-A Suggested Land Use
4-B Potential Development Sites
4-C 1985 Estimated Average Daily Traffic
5. Alternative "A": Recommended Roadway Alignment
6. Recommended Roadway Dimensions - Alternative "A"
7. Alternative "B": Recommended Roadway Alignment
8. Schematic of Suggested Broadway Bridge Redesign
9-A Recommended Roadway Dimensions - Alternative "B"
9-B A Street - W. Second Street Connection
10-A Alternative "C": Recommended Roadway Alignment
10-B Detail of Alignment "C" in the Railroad Cut
11. Recommended Roadway Dimensions - Alternative "C"
12. Recommended Dimensions for Two-Land Roadway Within the Railroad Cut

LIST OF TABLES

1. Traffic Forecast for Year 1985
2. Traffic Forecast for Year 2000

APPENDICES

A. Vacant and Underused Land
B. 1985 Site Generated Traffic Demand
C. Seaport Access Road Alternatives: Construction Cost Estimates
D. Seaport Access Road: Acquisition, Relocation and Demolition Cost Estimates

SUMMARY AND CONCLUSIONS

NATURE OF THE PROBLEM

This study resulted from two major problems. The first was the large amount of heavy truck traffic using the residential and commercial streets of the South Boston neighborhood which resulted in problems of public safety and convenience, noise and air pollution. The second was the large amount of undeveloped and underdeveloped land in the northern section of South Boston. Early in the study it became apparent that these two problems were closely related. Forcing truck traffic to use local streets was as unattractive to the truckers and the concerns using trucks to transport their supplies and products as it was to the impacted residential community.

NATURE OF THE STUDY

In an effort to find a solution for these problems, the Boston Redevelopment Authority (BRA) in its capacity as the City's official planning agency undertook a staff study that investigated different road alignments to determine which would best meet the twin goals of reducing impact on the residential community and increasing access to and from the industrial areas to the north. Three of these alternatives were considered of sufficient merit and practicality to be studied in more detail. The three selected alternatives are presented and compared in this report. After careful evaluation of the strengths and weaknesses of each proposal, Alternative "B" was judged to be the most feasible of the alternatives and has been recommended for detailed environmental and feasibility studies.

THE RECOMMENDED ALTERNATIVE

The basic components of Alternative "B" may be described briefly as follows:

1. Four-lane at-grade roadway in the railroad right-of-way from West Second Street to Northern Avenue.
2. Widening the Broadway Bridge to accommodate additional traffic.
3. Upgrading and extending West Second Street to make a direct connection between the north - south segments of the Seaport Access Road and the Broadway Bridge.
4. Intersection with West First Street Truck Route.
5. Total estimated cost of constructing the proposed Seaport Access Road and its associated land acquisition and demolition is $6,031,000.

Alternative "B" has been selected for further development because it achieves the following objectives:

1. Provides improved access to prime industrial sites, both existing and proposed.
2. Relieves local residential streets such as D Street and Dorchester Street of heavy truck traffic.
3. Reserves the land within the railroad right-of-way between West First Street and Southampton Street for possible further use as either a mass transit corridor or major arterial street. This is considered a positive feature as it holds open future design options regarding the type and character of long range transportation improvements in South Boston, pending final decisions on related transportation projects such as the Dorchester Avenue extension.

COMMUNITY INVOLVEMENT

During the course of this study various community leaders have been contacted and their ideas and suggestions have been incorporated in our work. Strong support was voiced for the Seaport Access Road concept. Community

approval must, of course, be contingent on detailed design. As this project is developed further, it will be necessary to have more extensive and more formalized discussions with the various communities (residents, business and land owners, truckers, etc.) involved. This communication will be carried out through the District Planning Program and as part of the Environmental Impact review work that is recommended as the next step.

NEXT STEPS

It is recommended that a formal request be made to the Massachusetts Department of Public Works and/or the State Office of the Secretary of Transportation and Construction for funding necessary feasibility and environmental studies.

CONCLUSION

In summary, the Boston Redevelopment Authority has examined a variety of alternatives and proposed specific transportation improvements intended to upgrade the road network of South Boston. The BRA has determined through contact with the South Boston Little City Hall, community groups, and individual residents that the suggested improvements are strongly desired by the people of South Boston and represent a positive response to identified transportation needs of the area.

CHAPTER I

SEAPORT ACCESS ROAD: CIRCULATION PLAN REQUIREMENTS

INTRODUCTION

South Boston is both a residential and commercial-industrial community. In general, the residential area is located in the southern half of the peninsula and industrial and shipping uses in the northern half. First Street, a newly rebuilt designated truck route, divides the two sections. In addition, the western corner is primarily industrial (west of A Street), and there is industry scattered throughout the residential area. The relationship between industry and residential uses has long been a source of problems for both communities.

One of the most difficult problems has been trucking. From the residents' side, the large number of heavy trucks passing through their community has been a constant source of danger, as well as creating problems of noise and air pollution. For the industries and shippers, the use of residential streets has slowed deliveries and made shipping more difficult and more expensive. At times, the problems have reached the point where the citizens took direct action by blocking streets to force trucks onto different routes The problem remained, however, because there exists no really suitable route for trucks coming from the south and west.

PROPOSED DEVELOPMENT

Joint private and public efforts are now underway to revitalize existing commercial and industrial properties in the northern sector of South Boston. The development effort centers on four large tracts of land for which substantial reuse plans exist: Fort Point Channel (63 acres), Northern Avenue-Summer Street MassPort properties (486 acres), and the South Boston Naval Annex (77 acres). Presently access to these sites is somewhat limited and several transportation

oriented improvements should be initiated if land usages other than low intensity developments are to proceed (see Figure 1).

The community, for its part, is concerned with the run-down condition of some of the residential areas that have been most badly impacted by the truck traffic and is currently looking at ways in which Community Development Revenue Sharing Funds can be used to help bring these neighborhoods back into better condition. Removal of the blighting impact of heavy truck traffic is one of the requirements for the success of the community's plans.

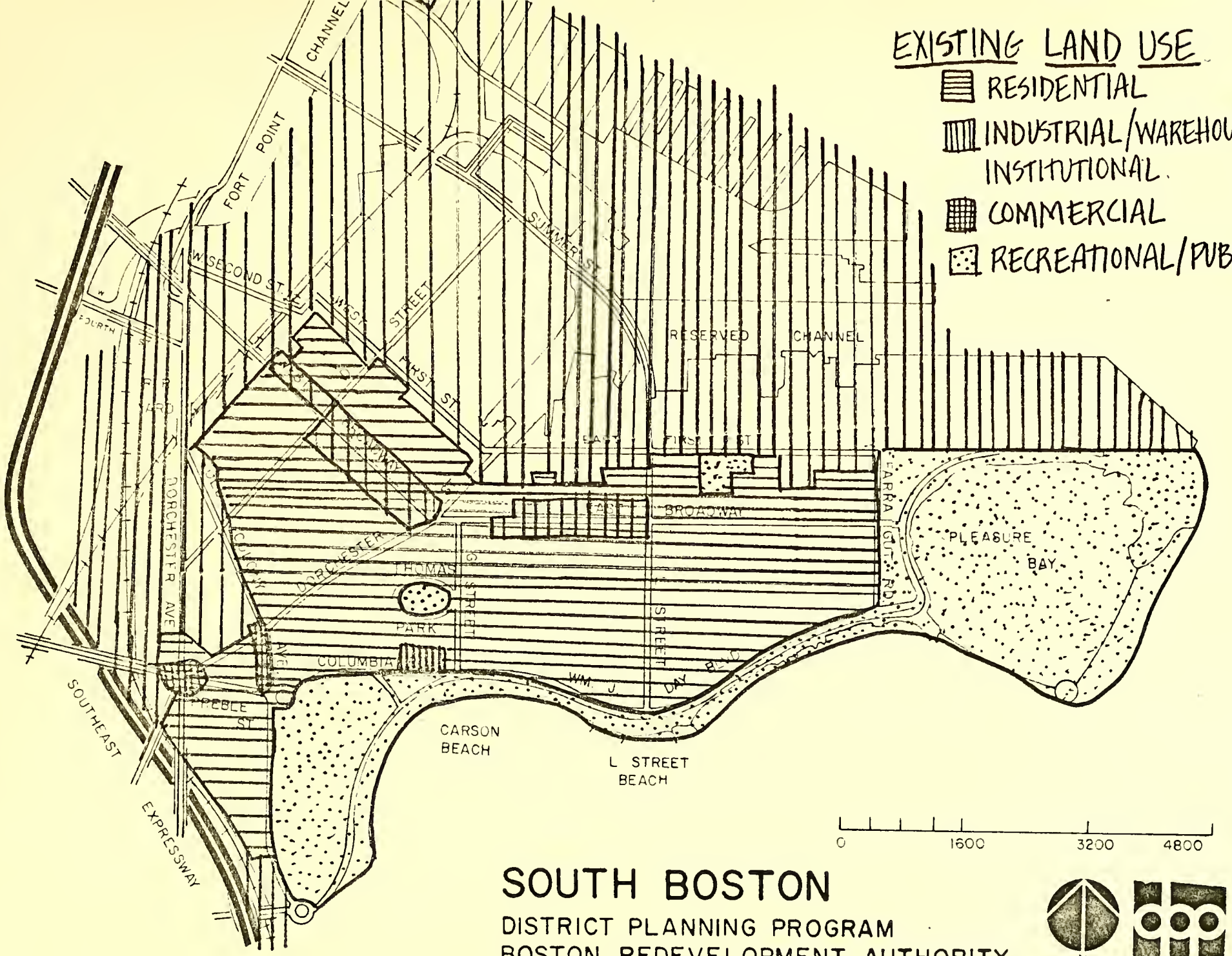
OBJECTIVES

The objectives of the Seaport Access Road System are:

1. To provide better access to prime industrial lands located north of First Street and west of Summer Street;
2. To remove extraneous truck traffic from local residential streets;
3. To meet both short and long range traffic requirements, and
4. To minimize negative environmental impacts resulting from truck traffic.

THE CONCEPT

The Seaport Access Road will be a primary arterial street extending from Northern Avenue southward towards Dorchester Avenue. This roadway will be located primarily within the existing Penn Central Railroad right-of-way. Recent conversation with a railroad official revealed that Penn Central is planning a significant reduction in the size of its present rail operations in Fort Point Channel and that long-range plans provide for a gradual phasing out of the entire rail yard.


EXISTING LAND USE
RESIDENTIAL
INDUSTRIAL/WAREHOUSE/
INSTITUTIONAL
COMMERCIAL
RECREATIONAL/PUBLIC
FORT POINT CHANNEL
SUMMER ST
W SECOND ST
FOURTH
WEST STREET
FIRST ST
RESERVED CHANNEL
EAST FIRST ST
BROADWAY
DORCHESTER AVE
DORCHESTER
THOMAS PARK
G STREET
COLUMBIA
TREBLE ST
SOUTHEAST EXPRESSWAY
CARSON BEACH
WM J DAY BLVD
L STREET BEACH
L STREET
EARRA GUT RD
PLEASURE BAY
0
1600
3200
4800
SOUTH BOSTON
DISTRICT PLANNING PROGRAM
BOSTON REDEVELOPMENT AUTHORITY
N

Three alternative schemes for the Seaport Access Road have been formulated, each depicting possible alignments and associated features. Each alternative has been carefully structured and evaluated according to its transportation, environmental, and community-wide implications. In all cases, the aim has been to provide a full range of options as to size and capabilities of the roadway.

The results of a comparison among the various alternatives are reported in Chapter 2 entitled "Evaluation of Alternatives for the Proposed Seaport Access Road System". Before commenting on the findings of this analysis, however, it is appropriate to discuss existing transportation conditions within South Boston.

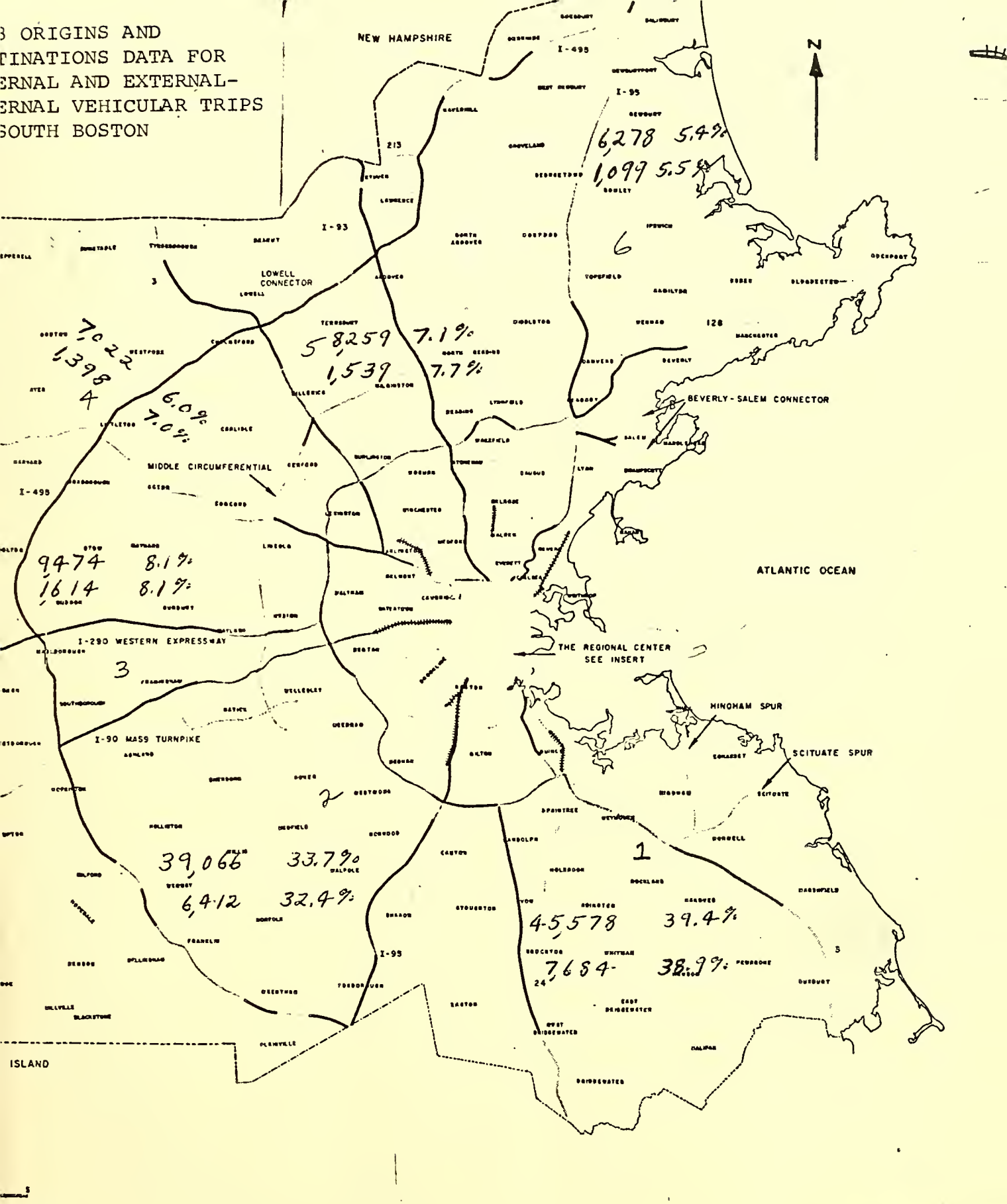
TRAFFIC VOLUMES AND EXISTING FACILITIES

A review of the 1963 origin and destination data prepared as part of the Eastern Massachusetts Regional Planning Project (EMRPP) shows that traffic movements into and out of South Boston were confined mainly to the southwestern travel corridors (See Figure 2).[1] Survey findings indicated that approximately 116,000 vehicular trips either entered or departed South Boston on a typical work day in 1963. A breakdown of corridor movements revealed that Corridors No. 1 and No. 2 accounted for 73.1% of all vehicular traffic or just in excess of 84,500 vehicular trips. Truck traffic was especially active within these two corridors with heavy trucks and tractor-trailer combinations averaging just over 14,000 trips or 71.4% of the total daily truck traffic.

---

1 Comprehensive Traffic and Transportation Inventory, Boston Regional Planning Project, Department of Commerce and Development, September, 1965.

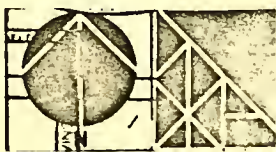
3 ORIGINS AND
TINATIONS DATA FOR
ERNAL AND EXTERNAL-
ERNAL VEHICULAR TRIPS
SOUTH BOSTON



OURCE:

EASTERN MASSACHUSETTS REGIONAL
PLANNING PROGRAM

- No. Vehicles; % By Corridor
- No. Heavy Trucks; % By Corridor

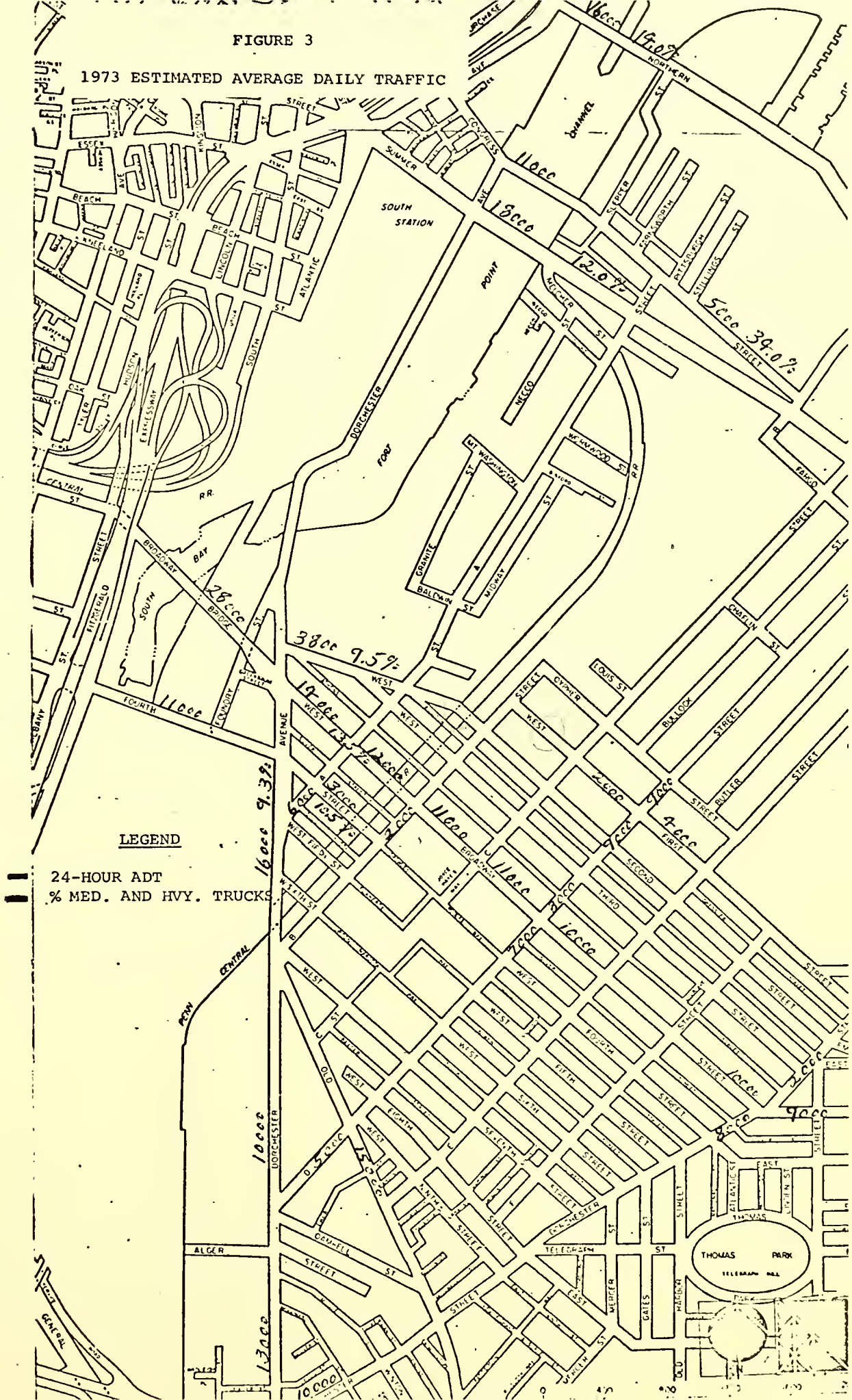


While the EMRPP study is somewhat outdated and, therefore, its relevancy for interpreting today's traffic patterns should be viewed cautiously, the findings suggest that sizable numbers of heavy trucks are still entering South Boston from the southwest. It is, however, the most current origin and destination information on travel patterns, especially truck movements into and away from South Boston, presently available.

A more current picutre of today's patterns of traffic distribution is the 1972 Area-wide TOPICS Plan for South Boston and from recent traffic counts taken by the Boston Traffic and Parking Department. Figure 3 summarizes 1973 traffic count information on South Boston. The traffic volumes shown here represent twenty-four hour Average Daily Traffic (ADT) volumes.

FIGURE 3

1973 ESTIMATED AVERAGE DAILY TRAFFIC



Briefly summarized, the data indicates that while traffic activities within the southwestern corridors are still strong, today's traffic movements into South Boston are coming predominantly from the north and east across Fort Point Channel. The Broadway Bridge alone had a recorded ADT of 28,000 vehicular trips or one-third of the daily east-west traffic flow. Summer Street and Northern Avenue also carried substantial amounts of traffic having ADT's of 18,000 and 16,000 vehicles, respectively. When taken together, it was found that these three locations accounted for 73.8% of all vehicular crossings of the Fort Point Channel. Congress Street and West Fourth Street bridges carried 26.2% of the total east-west traffic or about 11,000 vehicles apiece. Altogether an estimated 84,000 vehicular trips occurred each day across the Fort Point Channel in 1973.

As expected, truck traffic entering South Boston from the north and east is largely confined to the above arterial routes. 1973 traffic classification counts showed that Northern Avenue, Broadway, and Summer Street carried sizeable numbers of trucks. The percentage of heavy trucks and tractor-trailer combinations at these location ranged from 12.0% to 14.0% of the ADT. Other streets carrying large volumes of truck traffic inlcuded West Fourth Street (10.5%), West Second Street (9.5%), and Dorchester Avenue (9.3%). Figure 3 expresses heavy truck volumes as a percentage of the ADT count for principal streets in South Boston.

Economic Development and Future Transportation Needs

The Seaport Access Road should be capable of satisfying legitimate community concerns regarding the future routing and distribution of traffic resulting from the growth of commerce and industry in Northern South Boston.

Present indications are that new higher intensity land uses will take place in South Boston during the next two decades. South Boston's attractiveness as a potential development site rests on several factors including proximity to the Central Business District and interstate highway system and the availability of approximately 900 acres of underused and vacant land. A wide variety of land uses have been suggested by various private and public interests. Types of uses suggested and/or planned for the area include industry and warehousing facilities, office space, commercial and residential complexes, shipbuilding and container-port facilities.

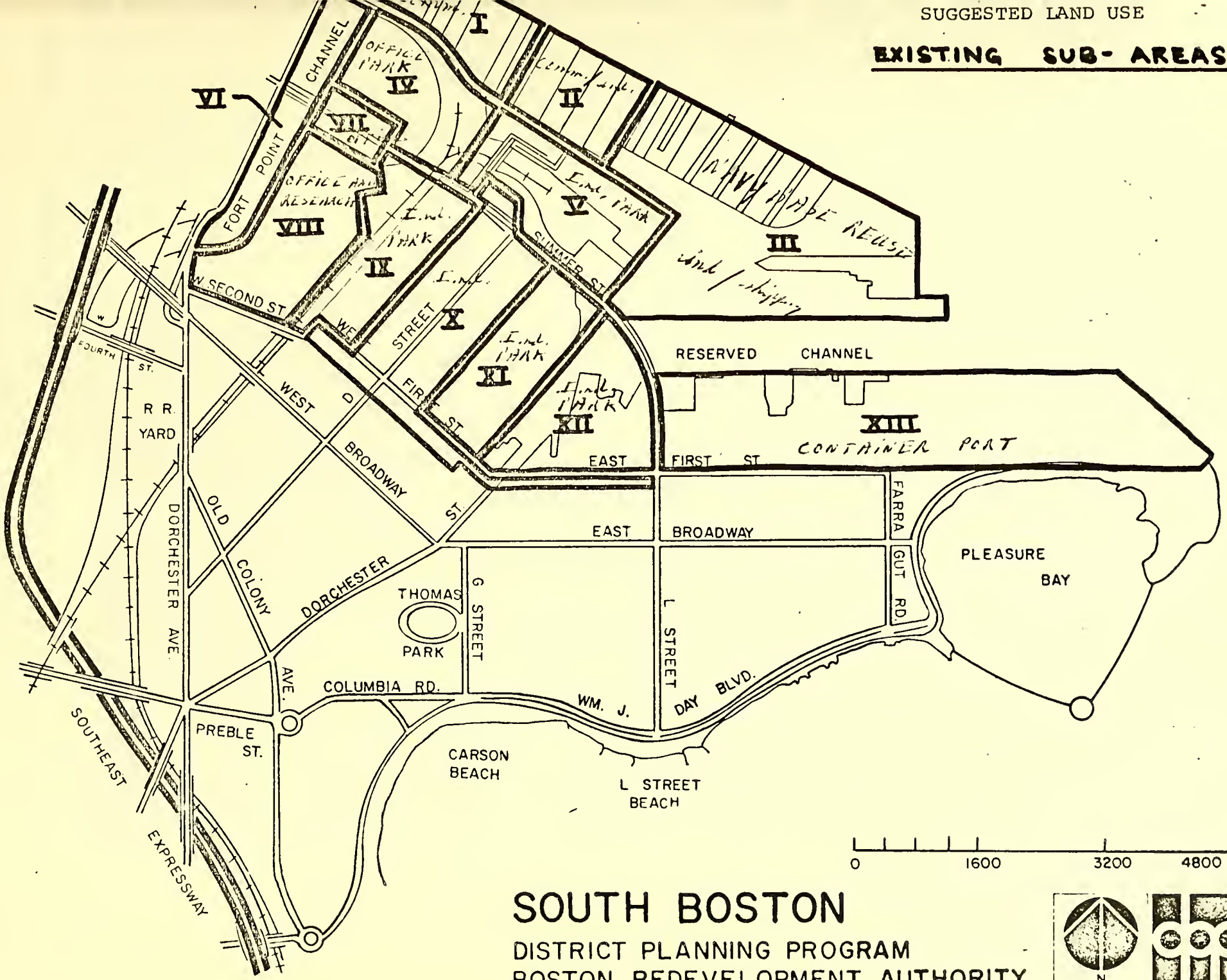
The Boston Economic Development and Industrial Commission (EDIC) has prepared a development profile of South Boston. Figure 4A shows the various sub-areas types of land use. A more refined EDIC breakdown of present and proposed land use including acreage estimates is found in Appendix "A". More immediate plans for the economic development of South Boston center around five large sites (See Figure 4B). Each site and its development characteristics, as presently viewed by developers, may be identified briefly, as follows:

Site "A" - Massport Planned Development

- Approximately 65 acre site
- Including Commonwealth Pier, Fish Pier, and area bounded by Northern Avenue, Summer Street, Viaduct street and Navy Base
- Plans presently include: convention center with 3,000 car parking garage; expansion of commercial fishing facilities; possible containerized freight terminal; and other port related developments

SUGGESTED LAND USE

EXISTING SUB-AREAS

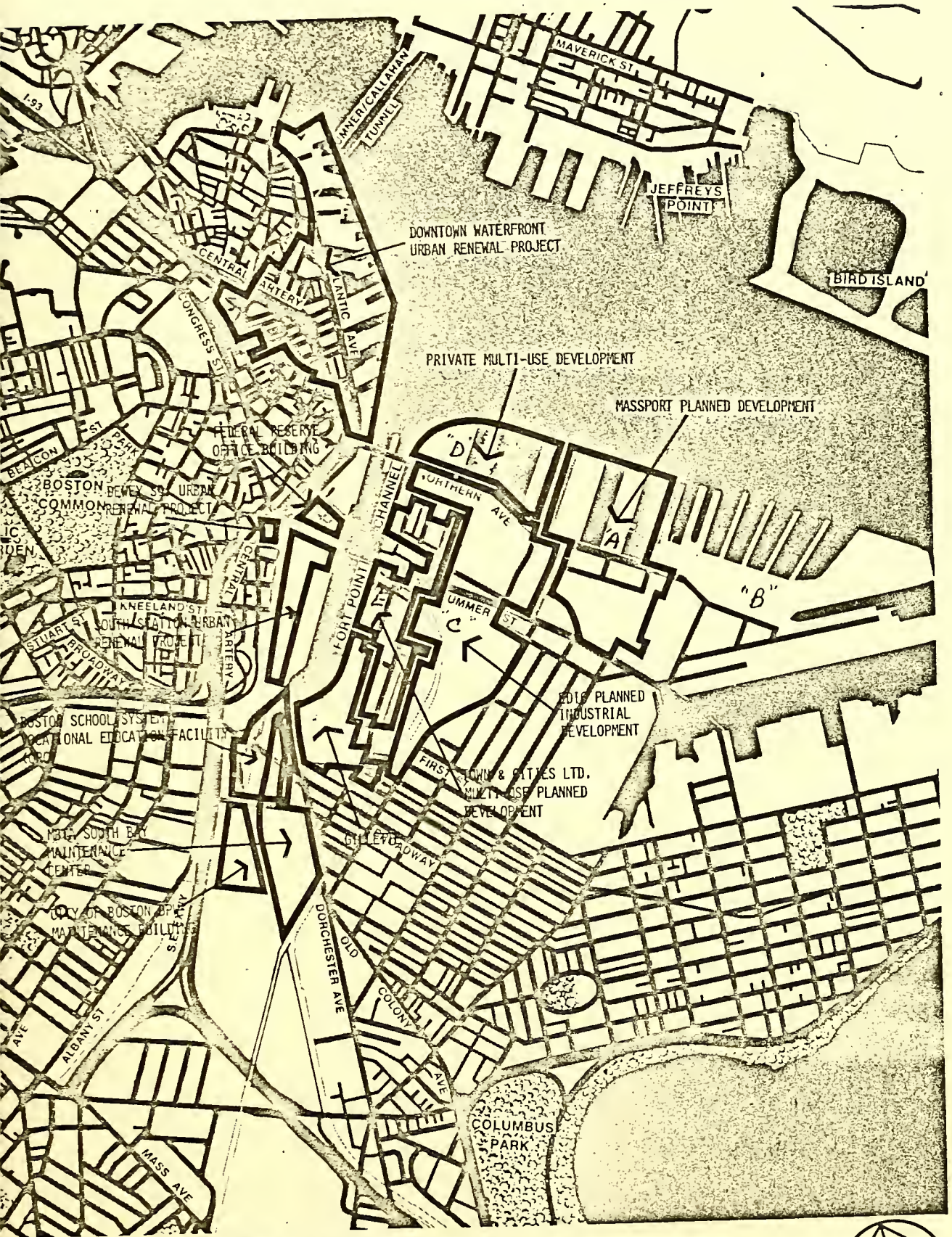


SOUTH BOSTON

DISTRICT PLANNING PROGRAM
BOSTON REDEVELOPMENT AUTHORITY

FIGURE 4-B

POTENTIAL DEVELOPMENT SITES



URRENT PLANNING PROJECTS

IG. 90

HARBOR CROSSING - SOUTH BOSTON

0 1000 2000 3000 FEET

Site "B" - Navy Base Annex

- Approximately 77 acres

- Site of present South Boston Naval Base Annex

- Suggested reuse plans include: industrial park development; shipbuilding activities, and possible containerport facility

- Estimated industrial park related employment 2100 employees

Site "C" - Industrial Development

- Approximately 17 acres to be assembled

- Site of present Penn-Central rail yards

- Planned industrial development

Site "D" - Anthony Athanas Property

- Approximately 30 acres

- Waterfront site including Piers 1 through 4

- Site has strong potential for redevelopemnt

- Current plans provide for: luxury apartments (1,000 units); hotel (capacity 600 units) with restaurant and related retail facilities; office and commercial establishments; a large marina and health club

- Design consultants estimate the new facilities, if fully developed, would provide living accomodations for 2400 permanent residents; employment for some 2000 individuals; and services for 4,800 hotel guests and visitors each day

Site "E" - Town and Cities Properties

- Approximately 33 acres

- Multi-use planned development adjacent to Channel

- Development plans calls for a mixture of land uses including: multi-family housing (1600 units); office and retail establishments; warehouse facilities

- Present estimates indicate that the development complex when completed could house in excess of 3,000 persons and employ as many as 700

The above description gives some indication of the magnitude and kinds of developments which will occur within South Boston in the foreseeable future. Understandably, there are many factors which will influence the scope and pace of eventual development. For example, there are certain transportation improvements which are essential to the overall development of the area. Foremost among these are the construction of the Seaport Access Road, the realignment and extension of Northern Avenue, the construction of a new Northern Avenue Bridge, the strengthening or replacement of existing bridges at Summer Street and Congress Street, the modification and widening of the Broadway Bridge, and the development of mass transit service to the sites. It is emphasized that construction of the Seaport Access Road and an improved Northern Avenue are of the utmost importance as their presence alone would go a long way towards stimulating active economic development and investment in the area.

Based on a review of EDIC information and general data furnished by the several developers, it was possible to predict, in a preliminary fashion at least, the impact of maximum economic development on South Boston. Rough estimates of future employment trends were prepared based on the EDIC information contained in Appendix "A". The employment estimates were made for two time periods. One interval stopped with the target year 1985 and emphasized the realization of current development goals for the five sites (A, B, C, D, and E) described above. The second forecast focused on complete economic development and full employment for all economic sub-areas by the year 2000.

This employment data was then used to estimate the total number of service trips that would be generated by the development packages for the two target years. The person trips were also broken down by mode of travel into auto and transit related trips based upon present and anticipated transportation trends in the area. The directions from which future trips would approach and depart the sites have been determined from recent cordon count information and 1995 travel projections prepared by the Massachusetts Department of Public Works.

The estimated traffic demand for both target years was arrived at by applying a factor to the total number of person trips. The factor is commonly known as the vehicular occupancy ratio and for purposes of analysis it was assumed to be 1.4 persons per vehicle.

Site generated traffic was assigned to the arterial street system based upon the location of major access points, the directional distribution, and traffic analysis. The site traffic was combined with non-site generated traffic in order to analyze peak hour traffic conditions.

Based upon the anticipated traffic demand and its assignments, capacity analyses were conducted to determine the adequacy of the roadway system. The principal findings resulting from the investigation are summarized below.

1985 Employment and Traffic Demand Forecast

EDIC estimates place the total amount of developable land in South Boston in the area north of First Street at 966 acres. Of this, some 684 acres or 70.8% has been classified as vacant or largely undeveloped. Potential 1985 development sites account for 222 acres or about one-third (32.5%) of the total undeveloped acreage.

Utilizing the standard of 130 employees per acre*, it was estimated that these five sites, if fully developed, could result in the expansion of the present work force by some 28,860 employees. This estimate provides one indication as to the numbers of future commuters who would require transportation services of one kind or another. The assumption was made that 30% of all work trips or approximately 8,650 persons would utilize the public transportation system. The more important components of this system would be the South Station rapid transit terminal and the local South Boston bus route(s). A high level of transit service patrons. The remainder of the work force (70%) consisting of some 20,000 plus individuals would rely upon private motor vehicles for the purpose of daily commuting.

It is reasonable to suppose that not all individuals will use their own vehicles. More likely, some employees will group together to form carpools, jitney operations, etc. The anticipated volume of site generated automobile traffic, assuming an average vehicular occupancy ratio of 1.4 persons per vehicle and one complete round trip per day per employee, was estimated at 28,860 trips each day. Truck traffic could be expected to add another 12% or approximately 3,500 additional round trips daily. Thus the 1985 average daily traffic volume expected to be generated by new development sites in South Boston approaches 32,500 vehicular trips per day (See Appendix "B" for detailed traffic volume calculations).

---

* Source: BRA Research Department

Table 1 permits a comparison to be made between existing traffic distributions and the 1985 distribution of new site generated traffic.

TABLE 1

TRAFFIC DISTRIBUTION
By
MAJOR ACCESS POINTS

	1973 Estimated ADT		1985 Estimated ADT		Change 1973 - 1985	
	Volume	%	Volume	%	No. Vehicles	%
Northern Avenue	16,000	12.0	22,450	13.6	6,450	+28.7
Congress Street	11,000	8.3	12,600	7.6	1,600	+12.7
Summer Street	18,000	13.5	22,850	13.8	4,850	+21.2
Broadway Bridge	28,000	21.1	32,850	19.9	4,850	+14.8
Fourth Street	11,000	8.3	12,600	7.6	1,600	+12.7
Dorchester Avenue	16,000	12.0	19,200	11.6	3,200	+16.7
Southampton Street	20,000	15.0	22,400	13.6	2,400	+10.7
William Day Boulevard	13,000	9.8	15,400	9.3	2,400	+15.6
Within South Boston	--	--	4,850	3.0	4,850	+100.0
TOTAL	133,000	100.0%	165,200	100.0%	32,200	

The breakdown in vehicular distribution shown in Table 1 indicates the major traffic increases are expected to be concentrated in the Fort Point Channel area, especially at Northern Avenue, Summer Street and the Broadway Bridge. For example, an increase of approximately 6,500 vehicular trips per day could be expected to occur at the new Northern Avenue Bridge. This represents an increase of 28.7% over its present 1973 traffic volume. More moderate increases in traffic i.e., 3200 vehicular trips per day, could be expected to occur along Dorchester Avenue.

Although Dorchester Avenue would remain a designated truck route, the majority of trucks are expected to take advantage of the new Broadway Bridge - W. Second Street connection. William Day Boulevard and Southampton Street are expected to experience moderate increases in automobile traffic only. In sum, the 1985 traffic should be well distributed along the arterial streets of South Boston and, therefore, no serious capacity problems are expected during the peak periods if the proposed Sea Port Access Road is constructed in operation. Table 2 shows traffic volume forecast and distribution for the year 2000.

Table 2 permits a comparison to be made between existing traffic distributions and the 2000 distribution of new site generated traffic.

TABLE 2

TRAFFIC DISTRIBUTION
By
MAJOR ACCESS POINTS

	1973 Estimated ADT		2000 Estimated ADT		Change 1973-2000	
	Volume	%	Volume	%	No. Vehicles	%
Northern Avenue	16,000	12.0	40,900	17.6	24,900	+156.0
Congress Street	11,000	8.3	16,000	6.9	5,000	+ 45.4
Summer Street	18,000	13.5	37,900	16.3	19,900	+111.0
Broadway Bridge	28,000	21.1	38,000	16.3	10,000	+ 35.7
Fourth Street	11,000	8.3	16,000	6.9	5,000	+ 45.5
Dorchester Avenue	16,000	12.0	26,000	11.2	10,000	+ 62.5
Southampton Street	20,000	15.0	25,000	10.7	5,000	+ 25.0
William Day Boulevard	13,000	9.8	18,000	7.7	5,000	+ 38.5
Within South Boston	---	---	14,900	6.4	14,000	+100.0
TOTAL:	133,000	100.0%	232,700	100.0%	99,700	

Residential Impact

The intrusion of heavy trucks into residential and mixed residential/commercial areas remains one of the most serious issues facing South Boston residents. For example, large trucks coming up from Dorchester Avenue make extensive use of "B" and "D" Streets in order to reach warehouse facilities located just north of West First Street. Similarly, many tractor-trailer combinations use Dorchester Street to reach containerized freight operations on Castle Island.

The entire problem of truck access and circulation within South Boston is recognized as an important local issue. Indeed, one of the objectives of this study is to provide improved access to local traffic generators by routing truck traffic around the periphery of the South Boston community and not through local residential streets. This issue along with the broader goal of improving the overall accessibility of potential development sites are closely interrelated and have been addressed jointly and within the context of the present transportation study. The capability of the proposed Seaport Access Road to deal effectively with these issues will stand as one measure of its desirability.

Related Project Improvements

The Seaport Access Road should be viewed as part of a larger transportation planning effort designed to upgrade the entire transportation system of South Boston. The most important of these improvements have been summarized below.

Northern Avenue

In many ways, the future industrial development of South Boston is contingent upon improved access from Northern Avenue. Presently, the Massachusetts Department of Public Works is reviewing plans for a new Northern Avenue located somewhat south of its present alignment. Under the proposed plan, Northern Avenue would interchange directly with the Central Artery.

Several development plans have been formulated on the supposition that this new roadway facility would be available. For example, development plans for a major residential/commercial complex on Piers 1-4 in Boston Harbor are being readied, but development of this site is awaiting the availability of an improved Northern Avenue. Similarly, planning for the reuse and conversion of the South Boston Naval Base Annex is gaining momentum. Present recommendations call for an industrial park, shipbuilding facilities and a possible containerport. Massport also has plans for commercial/industrial development of the old rail yards which are situated just west of the Navy Annex. The one factor common to all three development sites is the immediate need for substantially improved access to and from the regional highway system. Without an improved Northern Avenue and the proposed Seaport Access Road, the pace of industrial expansion within South Boston will not only proceed slowly but perhaps not at all.

Third Harbor Crossing

The Boston Transportation Planning Review has evaluated several long range transportation proposals for the Greater Boston Area. One such proposal included plans for a third harbor crossing. If built, this facility would extend from the Massachusetts Turnpike-Southeast Expressway interchange to Logan Airport and highways to the northeast.

Bridge Crossings at Northern Avenue, Congress and Summer Streets

The capacity of the arterial street network serving South Boston is limited by the existing bridge crossings over Fort Point Channel at Northern Avenue, Congress and Summer Streets. Each of the present bridge structures is old and in poor physical condition. The Northern Avenue Bridge has been designated for replacement under current DPW plans. Studies required to initiate planning for the reconstruction of the Congress and Summer Street Bridges have been proposed as part of the City's current Unified Work Program. Such improvements must be viewed as part of the overall planning effort required to upgrade the South Boston transportation network to meet future development needs.

Northern Avenue - Summer Street Connector

Northern Avenue, Congress and Summer Streets are all important arterials which are presently inadequately connected. Congress Street, for example, is tied to Northern Avenue and Summer Street only by a very indirect connection. Circulation between these primary arterials is presently extremely limited and improvements should be made to provide a connector with adequate capacity. In this regard, it should be noted that Massport is considering construction of a new roadway from Northern Avenue to Summer Street through its property.

New Dorchester Avenue

Whether or not the Dorchester Avenue bridge and the northern section of Dorchester Avenue are to be re-established as a major arterial link between South Boston, the Central Business District and the Central Artery is now under study. Under one suggested plan, Dorchester Avenue would be tied in with a realigned Atlantic Avenue and Northern Avenue on the west bank of Fort Point Channel.

Conclusion

The above description underscores the need for improved transportation access both into and out of South Boston and relates the proposed Seaport Access Road to other planning and transportation issues. It should be clear that the future growth of this area will be strongly influenced by positive transportation and land use decisions leading to new industrial development and revitalization of residential and commercial streets and neighborhoods.

CHAPTER 2

EVALUATION OF ALTERNATIVES FOR PROPOSED SEAPORT ACCESS ROAD SYSTEM

A total of seven alternatives were examined during the course of this study; the three most plausible alternatives have been selected for detailed analysis and are discussed below. A summary showing the principal characteristics of the various alternatives, including performance features, design options, costs and traffic volumes to capacity ratios is found in Appendix "C".

Alternative "A"

Route Profile

A six lane primary arterial street would be constructed at grade extending a distance of 1.1 miles between Northern Avenue and Dorchester Avenue. The right-of-way below First Street would extend along the western border of the Penn-Central Railroad cut and necessitate some acquisition of adjacent properties. Construction would involve the fill-ins of a sizeable portion of the existing railroad cut and construction of a new retaining wall (see Figure 5).

Under this arrangement, arterial street connections would occur at grade with Northern Avenue, West Broadway, and Dorchester Avenue. Summer Street would be tied into the Seaport Access Road system through the construction of appropriate ramp facilities.

Railroad facilities would be impacted to some extent requiring the removal of at least two of the four existing main rail lines. There are presently ten bridges spanning the railroad cut. These structures would be severely impacted by the proposed roadway and it is anticipated that the majority of them would have to be either substantially modified or completely rebuilt.

Roadway Characteristics

Alternative "A" provides for a paved, six-lane, divided roadway constructed to first-class standards. There would be three moving lanes in each direction. Minimum right-of-way requirements for the facility including roadway, parking, sidewalk and utility installation is estimated at 92 feet (see Figure 6).

A sizeable median of thirty-three feet in width would be considered an added design feature which could be available for mass transit or roadway expansion, as needed. This addition would raise the needed right-of-way to approximately 125 feet.

Land Acquisition and Demolition

Of the three alternatives under investigation, Alternative "A" requires the greatest amount of land acquisition. Estimated total land acquisition requirements, excluding the Penn-Central right-of-way, approach 4.4 acres. The estimated cost of such takings is $1,120,000. A total of sixteen demolitions would be required of which six are buildings know to be in residential use. Demolition cost estimates have been placed between $90,000 - $150,000. Appendix "D" provides a comparison of the acquisition, demolition and relocation requirements of the various alternatives.

Relocation Requirements

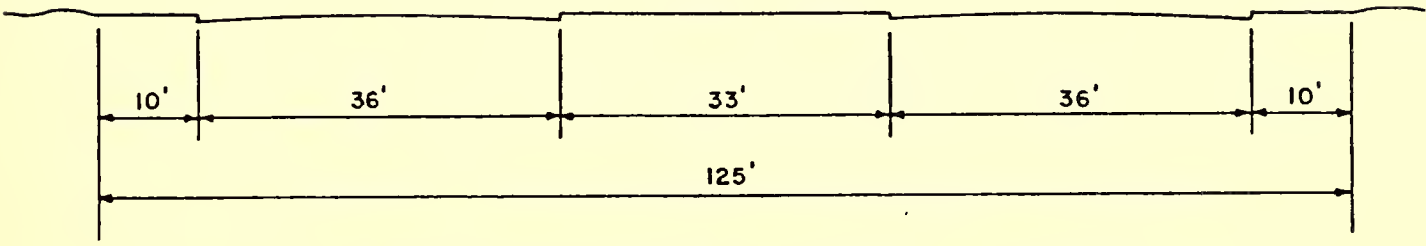
The extensive land acquisition and demolition requirements made necessary under Alternative "A" make it somewhat unattractive as an alternative for the proposed Seaport Access Road. Moreover, its relocation impact is primarily residential in character, necessitating the relocation of some ten tenant families.

FIGURE 6

SEAPORT ACCESS ROAD

REPORT ON ALTERNATIVE ALIGNMENTS

STREET SECTIONS



SIX-LANE ROAD With WIDE MEDIAN

ALTERNATIVE "A"

Service Characteristics

From a transportation standpoint, Alternative "A" was found to offer the following:

A. Advantages

1. High capacity roadway with an estimated average hourly capacity of 1,500 vehicles per hour in both directions. This facility should prove more than adequate in handling anticipated Seaport Access Road traffic volumes.
2. In the event that the new Dorchester Avenue extension is not built, it is assumed that the Seaport Access Road under Alternative arrangement "A" would service commuters desiring to travel between Dorchester Avenue and the Central Artery.

B. Disadvantages

1. Differences in grade discourage direct linkage with West First Street which is and will probably remain a major truck route in the area. Without such a connection, it is doubtful that the proposed roadway would be effective in attracting trucks which now enter South Boston from the Southwest away from local residential streets.
2. Numerous at-grade crossings of local east-west streets such as West Broadway would necessitate additional traffic controls including improved signalization.

Community and Environmental Impact

Alternative "A" has the greatest environmental impact on the South Boston community in terms of land acquisition, site demolition, and residential relocation. It is anticipated that Alternative "A" would

also produce the highest amount of noise and air pollution of the several alternatives under consideration. This is consistent with the fact that over time this roadway has the capacity for carrying the greatest amount of vehicular traffic.

Development Cost

The cost of building this road from Dorchester Avenue to Northern Avenue is estimated at $6,427,000. Because construction requires heavy in-filling and the building of a new retainage wall in the cut, development time is expected to be longer than for the other two alternatives. Actual construction time has not been estimated.

Summary Evaluation

In many ways Alternative "A" is the most elaborate of three alternatives under consideration. Its overall capabilities to move large volumes of traffic far exceed the requirements of a limited purpose Seaport Access Road. By functioning as a principal north-south collector route and with major at grade intersections with West Broadway, Fourth Street, and Dorchester Avenue, this facility could assist in the realization of long-range transportation goals of the region.

Unfortunately, however, the suggested roadway alignment does not satisfy other and more significant short-range community goals. For example, without a West First Street connection, heavy trucks will continue to impact West Broadway and certain east-west streets, i.e., Dorchester Street, "B" Street, and "D" Street. In a sense, therefore, the proposed roadway would be dysfunctional in that it would not meet an important internal circulation need which is to remove truck traffic from local residential streets and to route it more effectively to the West First Street truck route.

ROUTE PROFILE

Alternative "B" calls for the construction of a four lane secondary arterial street extending from the Broadway Bridge, along an improved West Second Street at declining grade to the railroad yard, and north through the railyards to Northern Avenue. An at-grade intersection between the Seaport Access Road and West First Street would take place within the railroad yard (see Figure 7).

Basic to this proposal is the redesign and extensive modification of the Broadway Bridge to accommodate additional traffic. Connections with the Southeast Expressway (I-95 South), the Massachusetts Turnpike (I-90) and the Central Artery (I-93, I-95 North) would be accomplished by means of existing interchange facilities at Broadway, Northern Avenue, and Summer Street. The latter would be connected with the Seaport Access Road through the construction of suitable ascent and descent ramps.

ROADWAY CHARACTERISTICS

Figure 8-A illustrates typical roadway dimensions for the Seaport Access Road as contemplated under Alternative "B". Basically, the facility would be a paved undivided roadway consisting of two moving lanes in each direction. The right-of-way has been placed at 64 feet as compared with 125 feet required under alternative arrangement "A".

LAND ACQUISITION AND DEMOLITION

Land takings would be modest under this scheme with only 1.1 acres designated for acquisition. Such takings would be confined almost exclusively to the Broadway Bridge-W. Second Street area. Preliminary estimates place the cost of such acquisition at $225,000.

When compared with the other schemes, another advantage of alternative "B" is that demolition work would be minimal. Unlike scheme "A", there would be absolutely no conflict with the ten existing bridges which span the railroad cut. Demolition work would be confined to three small buildings all of which are non-residential in character. Demolition costs have been placed at $10,500.

RESIDENTIAL RELOCATION REQUIREMENTS

As none of the affected building structures are of a residential nature, no family relocation problems are anticipated at this time.

SERVICE CHARACTERISTICS

The major transportation features of Alternative "B" include the following:

A) Advantages

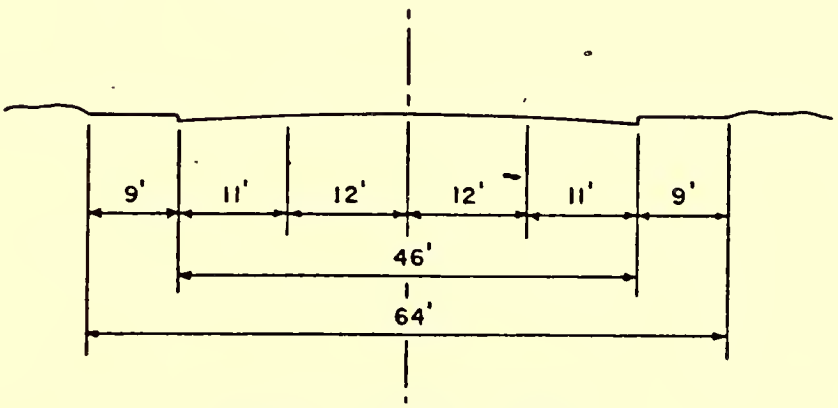
1. Alternative "B" provides for a direct connection with the W. First Street truck route.

FIGURE 8-A

SEAPORT ACCESS ROAD

REPORT ON ALTERNATIVE ALIGNMENTS

STREET SECTIONS



FOUR-LANE ROAD

ALTERNATIVE "B"

2. The W. Second Street improvement will cause only minimal disruption of existing traffic patterns and local street intersections. Some upgrading, however, will be required at the intersection with "A" Street.

3. Broadway Bridge improvements should result in better access to the Southeast Expressway and the Massachusetts Turnpike.

4. From a construction cost standpoint, Alternative "B" is the least expensive of the three alternatives costing about $4,864,000. (See Appendix "C").

5. Main rail lines within the Penn-Central cut would be largely undisturbed by the terms of this plan. Therefore, such facilities as well as their right-of-way would remain available for possible future transportation use.

B) Disadvantages

1. Under scheme "B", the Seaport Access Road would not connect directly with two major arterial streets, namely, Dorchester Avenue and W. Broadway. However, this situation could be remedied by permitting "A" street to serve as the linkage between Dorchester Avenue and an improved W. Second Street.

2. As an improved W. Second Street enters the railroad yard at grade, a possible conflict may develop with the rail line which presently services the Gilette Plant. This matter is not regarded as an insurmountable obstacle at this time.

3. While not considered a serious disadvantage, some minor inconvenience would result from the fact that the connection between the Seaport Access Road and W. First Street would require an at grade crossing of existing rail facilities within the Penn-Central yard.

COMMUNITY AND ENVIRONMENTAL IMPACT

Alternative "B" would appear to be the most acceptable of the various alternatives because it has the least negative impact on the environment. The proposed plan entails the smallest amount of demolition (only three buildings), the least land acquisition and associated costs and no residential relocation. The fact that the roadway would be located largely at grade level and within the existing railroad cut indicates that noise, air, and visual pollution problems would be minimized.

DEVELOPMENT COST

The cost of building this road from the Broadway Bridge to Northern Avenue, including the extension and upgrading of W. Second Street, has been estimated at $4,864,000.

SUMMARY EVALUATION

In many ways, alterantive "B" was found to be the most reasonable and practical of the alternatives under investigation. The real advantage of this plan over others rests on its capabilities to capture or

intercept truck traffic coming from both the Broadway Bridge and Dorchester Avenue and routing it around, not through, local residential streets. This accomplishment of a long-standing community goal is made possible through implementation of the Broadway Bridge-W. Second Street improvement and tie-in with W. First Street. Under this plan, traffic would enter the W. First Street truck route from the Broadway Bridge by way of an improved W. Second Street. Dorchester Avenue traffic would have the option of either:

(a) proceeding to the intersection of Dorchester Avenue and W. Second Street and turning right onto the facility or,

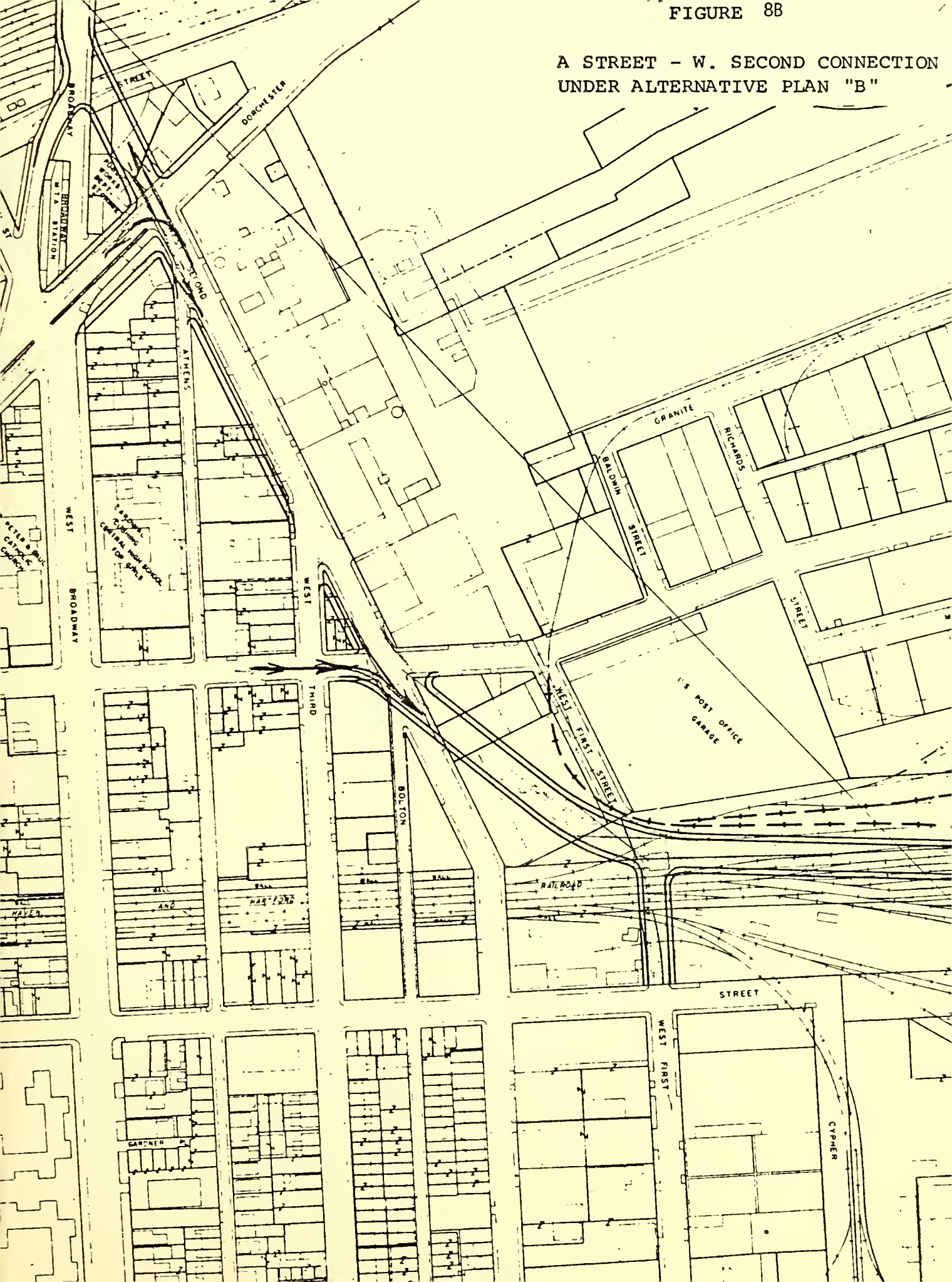
(b) turning right at "A" Street and proceeding directly to W. Second Street. (See Figure 8B).

In the latter case, "A" Street would necessarily become a designated truck route. If warranted, "A" Street could in time become a one-way facility. In that event, motorists coming from the Seaport Access Road and desiring to proceed south would be permitted to make left turns from W. Second Street directly onto Dorchester Avenue. This route would become mandatory for all truck traffic.

Besides providing a high level of transportation service to the community, another attractive feature of Alternative "B" is that the plan could be implemented with only a minimum amount of environmental impact and community disturbance.

FIGURE 8B

A STREET - W. SECOND CONNECTION
UNDER ALTERNATIVE PLAN "B"



ALTERNATIVE "C"

ROUTE PROFILE

This proposal calls for the construction of a four-lane at-grade arterial street within the railroad right-of-way running from Northern Avenue to W. First Street. From this point, the Seaport Access Road narrows to two lanes and continues southward to connect with Southampton Street and the Southeast Expressway. Other elements of the proposal include the extension of W. Second Street to the Broadway Bridge and an at-grade connection with W. First Street (See Figure 9A). Widening of the Broadway Bridge would not be required and only minor upgrading of W. Second Street would be needed.

Differences in grade level between the proposed Seaport Access Road and the existing street network would necessitate the construction of ramp facilities at both Summer Street and Dorchester Avenue. It would appear that the proposed interchange between the Seaport Access Road, Southampton Street, and the Southeast Expressway could be effectuated through modifications of existing ramps and service road facilities. A more precise explanation of the types of improvements needed at these locations can be made only on the basis of a detailed engineering study.

By aligning the roadway along the eastern side of the railroad cut, a traffic flow is created which favors heavy turning movements between the Seaport Access Road and W. First Street (See Figure 9B). This is considered to be a positive design feature. This alignment should also meet the needs for a descent ramp linking Dorchester Avenue with the Seaport Access Road in the vicinity of the W. Sixth Street Bridge.

BOSTON REDEVELOPMENT AUTHORITY
TRANSPORTATION PLANNING DEPARTMENT

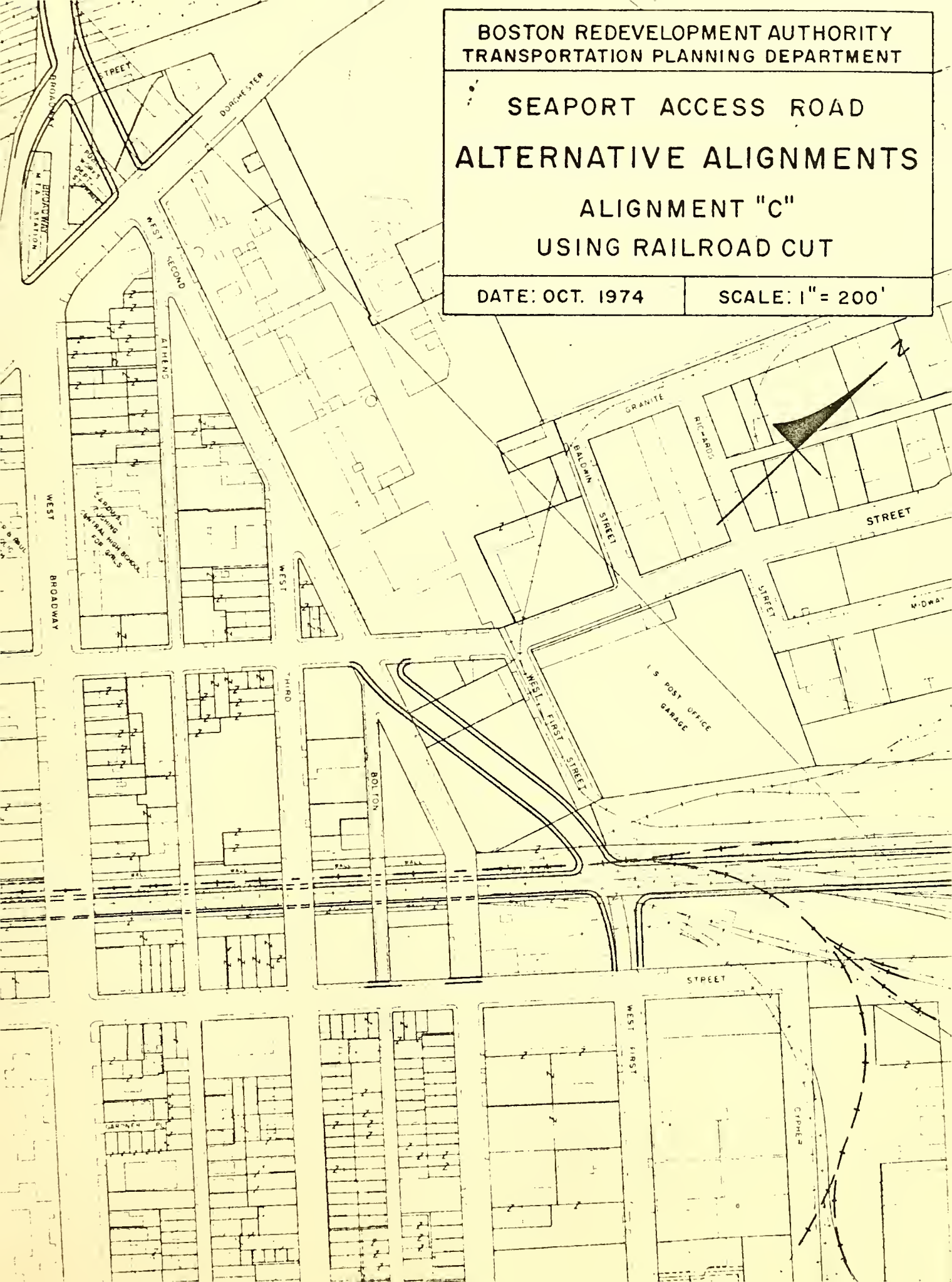
SEAPORT ACCESS ROAD

ALTERNATIVE ALIGNMENTS

ALIGNMENT "C"

USING RAILROAD CUT

DATE: OCT. 1974 | SCALE: 1" = 200'



ROADWAY CHARACTERISTICS

Recommended roadway dimensions for that section of the Seaport Access Road between Northern Avenue and W. First Street are presented in Figure 10. Total right-of-way requirements have been estimated at 64 feet.

The railroad cut is very narrow in the area south of W. First Street. This condition has placed a serious restraint on Alternative Plan "C" and has limited the present recommendation to a two-lane roadway. Figure 11 presents a typical cross-section for that segment of roadway which would extend from the Southeast Expressway to W. First Street.

LAND ACQUISITION AND DEMOLITION

Land acquisition would be moderate, totaling about 3.7 acres. Takings would occur in the vicinity of the Broadway Bridge improvement and along "B" Street in the block between West Sixth Street and West Fifth Street. The latter area would be used for the construction of a descent ramp linking Dorchester Avenue with the Seaport Access Road. Initial estimates place the total cost of land acquisition at about $1,110,000.

In contrast to Alternative arrangement "B", Alternative "C" would necessitate a substantial amount of demolition work. A total of eleven structures would be affected, but only one of these would be a residential structure. The estimated cost of demolition ranges between $63,000 - $102,000.

RELOCATION REQUIREMENTS

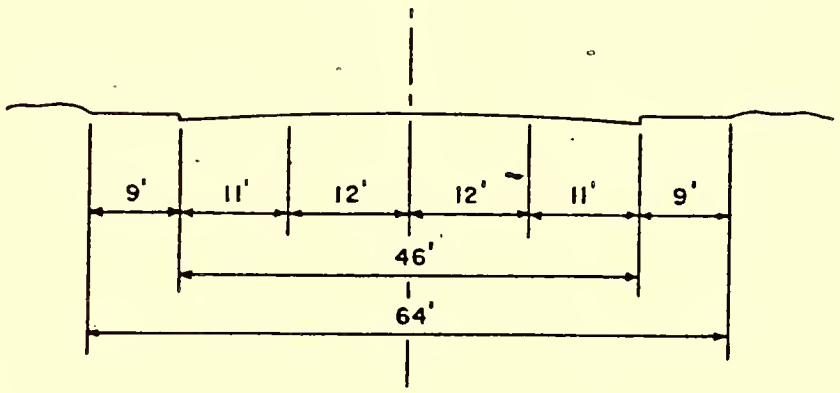
Ten of the eleven structures which would have to undergo demolition are non-residential. The one remaining structure is a single family, owner-occupied dwelling.

FIGURE 10

SEAPORT ACCESS ROAD

REPORT ON ALTERNATIVE ALIGNMENTS

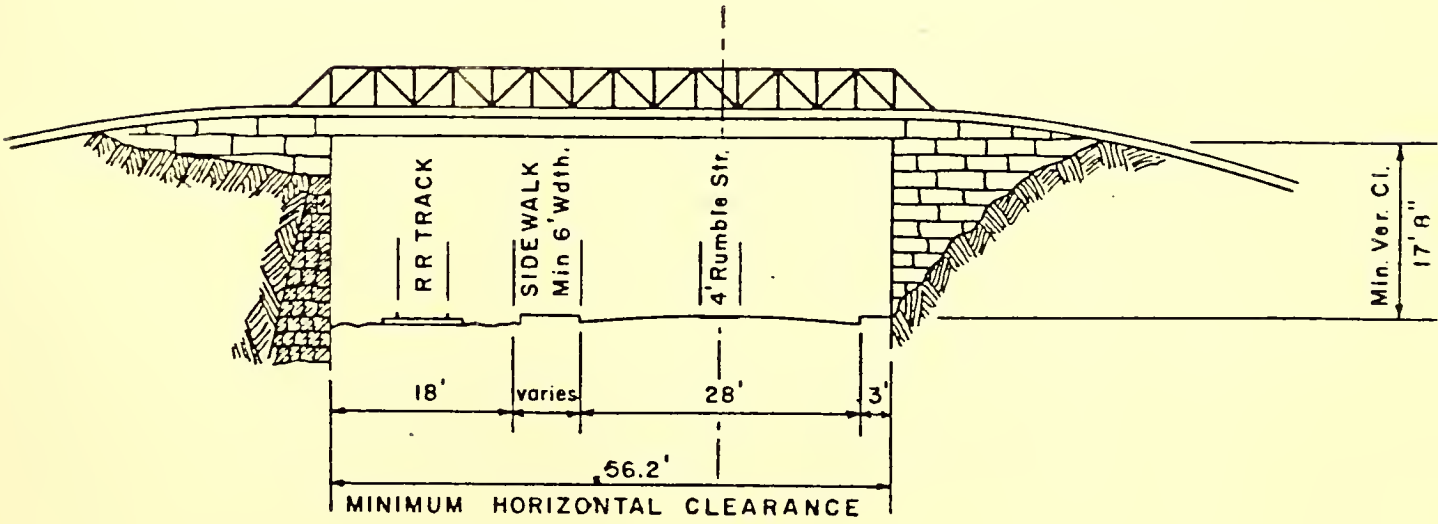
STREET SECTIONS



FOUR-LANE ROAD

ALTERNATIVE "C"

FIGURE 12



TWO-LANE ROAD IN RAILROAD CUT

ALTERNATIVE "C"

SERVICE CHARACTERISTICS

Transportation characteristics of Alternative "C" may be summarized briefly, as follows:

A. Advantages

1. The Seaport Access Road would be connected directly with the Southeast Expressway and Southampton Street. It is expected that such a connection would succeed in bringing about a substantial reduction in the number of trucks which now enter South Boston by way of Dorchester Avenue and the Broadway Bridge.

2. The Broadway Bridge - West Second Street connection would provide improved access between the West First Street truck route and the Massachusetts Turnpike and Central Artery.

3. Alternative "C" provides all the industrial sectors of South Boston, including Fort Point Channel and the Navy Base, with excellent access.

B. Disadvantages

1. An important concern is that the Seaport Access Road under Alternative arrangement "C" would begin almost immediately to generate more traffic than it could effectively handle.

2. Penn-Central would be required to reduce its present operations to one rail line located along the western edge of the cut.

3. Within the railroad yard itself, motorists driving on the Seaport Access Road would have to contend with two at-grade level railroad crossings (see Figure 11). This would present a special problem for oil trucks.

4. It is anticipated that there would be little or no reserve capacity on the roadway during peak periods. The project staff has estimated the average hourly capacity of the roadway to be equal to 1,000 vehicles per hour in each direction. Peak hour estimates of traffic volume to capacity indicate a 70% utilization ratio on the roadway section lying between the Southeast Expressway and West First Street. Full 100% capacity utilization would be expected to occur on the main roadway section between West First Street and Northern Avenue. Two factors accounting for this situation are the added vehicular traffic from the Broadway Bridge and capacity restraints resulting from two at-grade railroad crossings.

5. Alternative "C" is the most expensive of the three alternatives averaging in excess of $9,000,000 for construction, land acquisition and demolition.

COMMUNITY AND ENVIRONMENTAL IMPACT

Alternative "C" ranks as an attractive alternative because it provides an improved route for almost all truck traffic entering and leaving South Boston. By carrying traffic below grade level, it should increase

traffic safety, improve the visual environment, and reduce ambient noise levels in the community. However, the plan would also entail the second greatest number of demolitions (11 structures), a substantial amount of land acquisition (3.7 acres), and high land acquisition and demolition costs.

DEVELOPMENT COST

The cost of building the proposed roadway from the Southeast Expressway to Northern Avenue, including modification of and connection to the Broadway Bridge is $7,690,000.

SUMMARY EVALUATION

Alternative "C" succeeds in achieving two of the three major goals established for the proposed Seaport Access Road. First, the plan does provide for faster and more convenient access to existing and proposed development sites within South Boston. Secondly, the proposed interchange with Southampton Street and the Southeast Expressway should enable the Seaport Access Road to attract large numbers of trucks away from Dorchester Avenue and local residential streets.

However, it is in respect to the third goal of meeting the future transportation needs not only of South Boston but of the region as a whole that we find this particular alternative falling short. First, the planned extension of the Seaport Access Road between West First Street and the Southeast Expressway may be premature, pending a final decision on the New Dorchester Avenue improvement. The latter project, if implemented, could make such a connection not only unnecessary, but unwarranted. Second, preliminary analysis indicates heavy traffic

utilization rates if Alternative "C" is adopted. Initial estimates indicate a peak hour demand to capacity ratio of 70% along the roadway between West First Street and Northern Avenue. The high rate of utilization is attributed to the fact that the Seaport Access Road under Alternative Arrangement "C" would not only service local South Boston traffic but also through traffic travelling between the Southeast Expressway and Northern Avenue. Third, large increases in the amount of vehicular traffic would seem to be incompatible with the overall objective of reducing traffic impacts within the South Boston area. From an environmental standpoint, it would appear that the West First Street - Southeast Expressway connection would not seem to be justified at this time. Fourth, using the railroad right-of-way between West First Street and the Southeast Expressway removes the possibility of reserving this corridor for future use by some type of mass transit system.

CHAPTER 3

RECOMMENDATIONS

SELECTION OF AN ALTERNATIVE

Based on project analyses, certain positive recommendations are in order:

1) A Feasibility and Environmental Impact Study somewhat more comprehensive than the present study should be undertaken to determine in detail the most suitable form of the proposed Seaport Access Road.
2) It is strongly recommended that alternative "B", as presented herein, be used as the basis of the Feasibility Study.
3) Elements of the proposed plan should be sufficiently detailed so that no pertinent engineering questions remain unanswered, e.g., the feasibility of widening the Broadway Bridge.
4) It is recommended that the Draft Environmental Impact Statement be prepared as part of the Feasibility Study, building upon the data contained in the present report.
5) More extensive community contacts should be initiated.

FINANCING THE FEASIBILITY STUDY

It is recommended that formal request be made to the Massachusetts Department of Public Works for federal or federal-state funds to conduct a Seaport Access Road Impact and Feasibility Study. This study could be managed by DPW directly, or under BRA auspices. It is recommended that a single consultant firm, mutually agreed upon and acceptable to the city, state and federal agencies involved, be selected to carry out the engineering and environmental analyses. The following elements should be included:

1) Complete and comprehensive evaluation of alternative "B" as the recommended design scheme.

2) Analysis and evaluation of any other alternatives which suggest themselves as viable and workable designs for the proposed Seaport Access Road.

3) Detailed description of recommended alternative including engineering, design, and unit cost components.

4) Suggested project implementation planning emphasizing those measures intended for immediate implementation and those destined for staged development.

5) An Environmental Impact Statement based on the reasonable alternative systems as well as the consequences resulting from a "no build" option.

6) Finally, identify financing plans or recommended funding arrangements for construction costs; e.g., Urban Systems, federal grants, state and local matching funds, etc.

COMMUNITY PARTICIPATION

As mentioned previously, community dissatisfaction was in part responsible for the undertaking of this study. The District Planning Program which has been underway in South Boston for over three years has involved citizens in the planning process from the very start. Participation should be sought from business, industry, and labor representatives who will be affected by the new road. State and city agencies involved with the development of the Fort Point Channel Area, the Harbor, and Industrial Development must also be involved in the planning process. The District Planning Program will provide citizens the opportunity to participate and to advise professional planners and technicians throughout the course of the Seaport Access Road Feasibility Study.

APPENDIX A

TABLE I
VACANT AND UNDERUSED LAND IN SOUTH BOSTON'S WATERFRONT -- INDUSTRIAL SECTOR

LOCATION AND DESCRIPTION	SQ. FT.	AVAILABLE ACREAGE	PRESENT USE	SUGGESTED REUSE
Area I				
Piers 1-4	1,594,000			
(in use)	-51,000		Anthony's Pier 4	
	1,543,000	35	Vacant piers	Waterfront commercial
Area II				
Commonwealth and				
Fish Piers	1,940,000			
	-480,000		Commonwealth Pier	
	- 40,000		Jimmy's	
	1,420,000	33	Vacant and deteriorated piers	Waterfront Commercial/industrial
Area III				
South Boston				
Navy Base	9,416,750	216	Navy activities (Now Vacant)	
Area IV				
Warehousing,				
Wholesaling,				
and rail yards	2,230,900			
	-942,200		Industrial buildings,	
	1,288,700	30	trucking sheds, and under-used rail yards	Office parks with warehousing and parking below
Area V				
Rail yards	2,254,200		commercial and	
	-712,000		industrial buildings	
	1,542,200	35	under-used rail yards	Industrial park
Area VI				
Fort Point				
Channel	1,794,800	41	Water (ommitted from total acreage)	
Area VII				
Office and			6-8 story	Office and related
Wholesaling	393,800	9	loft buildings	service

Source: Boston Economic and Development Commission

TABLE I -- continued
VACANT AND UNDERUSED LAND IN SOUTH BOSTON'S WATERFRONT -- INDUSTRIAL SECTOR

LOCATION AND DESCRIPTION	SQ. FT.	ACREAGE	PRESENT USE	SUGGESTED REUSE
Area VIII				
Gillette, Boston Wharf, and others	3,039,900			
	-2,040,800		Gillett and others	Office and research
	999,100	22	Dilapidated buildings and unstructured parking	
Area IX				
Rail yards	2,480,800			
	-54,000		Industrial buildings	
	2,426,800	56	Underused rail yards and dilapidated buildings	Industrial park
Area X				
Food processing, trucking, and manufacturing	3,966,900			
	-3,583,800		Buildings	
	383,100	9	under-used rail spurs	Industrial space
Area XI				
Former "E" St. Naval Annex	2,675,800		Recent industrial development	
	-983,500		Mostly vacant	
	1,692,300	39	land	Industrial park
Area XII				
Heavy industry electrical equip. and water inlet	2,346,000		Industrial building and electrical equip.	
	-740,000		Vacant land and	Industrial park
	1,606,000	37	unused channel	
Area XIII				
Industrial area south of Reserved Channel	7,936,300		Boston Edison	
	-1,050,000		White Fuel and	
	-1,570,000		others	
	5,316,300	122	Vacant and under-used land	Consolidated seaport
TOTAL AVAILABLE ACREAGE		643		

APPENDIX "B"

1985 SITE GENERATED
TRAFFIC DEMAND

Total Developable Land	966 Acres
Vacant or Largely Undeveloped	684 Acres
Potential 1985 Development (for five relocated South Boston sites)	222 Acres or about one-third of undeveloped land
Recommended Standard Density	130 Employees per Acre
Potential 1985 Employment	28,860 Employees
No. of Person Trips By Mode:	
1. Transit ridership estimated at 30% or approximately	8,659 Patrons
2. Private motor vehicle ridership estimated at 70% or about	20,200 Employees
Assumed vehicle occupancy ratio	1.4 Persons per vehicle
No. of Vehicular Trips	
1. No. of daily one-way vehicular traffic	14,450 trips/day
2. No. of daily two-way vehicular traffic (assuming one complete round trip per day per employee)	28,900 trips/day
Additional demand in form of medium and heavy trucks estimated at 12% of normal daily traffic	3,500 truck trips/day
Estimated total daily traffic for combined auto and truck modes	32,400 vehicular trips/day

Basic Characteristics	RATIO of estimated Peak-hour Directional TRAFFIC VOLUME TO CAPACITY	Performance	Estimated Cost	
A. At grade 6-lane divided Northern Ave. To Dorchester Ave.	$\frac{1,000}{1,500} = 0.67$	Generous detail and dimension Maximum land acquisition Residential relocation Industrial relocation No interchange with W. 1st St. possible	mimimum + options 1,5,7,8 sub-total + acquisition + demolition Total	$6,427,000 1,211,000 $7,638,000 1,120,000 150,000 $8,908,000
B. At grade 4-lane undivided W. 2nd St. improvement and extension: Dorchester Ave. to Broadway Bridge Broadway Bridge widening	$\frac{600}{1,000} = 0,60$	Land acquisition Residential relocation Interchange with W.1st St. possible	Minimum cost of items 1 & 2 below) + options 3,5 sub-total + acquisition + demolition Total	$4,864,000(includes 932,000 $5,796,000 225,000 10,000 $6.031.000
C. At grade 4-lane undivided Grade intersection with W.1st St. W.2nd St. extension: Dorcehster Ave. to Broadway Bridge 2-lane in R.R. cut: W. 1st St. to Southampton.	2-lane: $\frac{700}{1,000} = 0,70$ 4-lane: $\frac{1,000}{1,000} = 1.00$	Logical extension to Southampton Intersecting with W.1st St. Land acquisition Industrial relocation Interferes with MBTA parking	minimum cost of items 1 & 4 below) + options 5,6 Sub-total + acquisition + demolition Total	$7,690,000(includes 262,000 $7,952,000 1,106,000 102,000 $9,160,000

DESIGN OPTIONS

1. W. 2nd St. improvement and extension	5. Summer St. ramps	$950,000	$131,000
2. Broadway Bridge modification and widening	6. Dorchester Ave. ramps	$864,000	$131,000
3. "B": W.1st St. to Dorchester Ave.	7. Extension of Biniford St.	$801,000	$ 56,000
4. "C": W.1st St. to Southampton	8. Extension of Wormwood St.	$3,041,000	$ 74,000

APPENDIX D

SEAPORT ACCESS ROAD PROJECT/ Comparative cost estimates

ITEM	SCHEME A	SCHEME B	SCHEME C
ACQUISITION			
Area (sq.ft.)	191,572 ¢ c. 4.4 acres	48,301 ¢ c. 1.1 acres	162,957 c. 3.7 acres
Cost*	$ 1,120,000 ~~1,119,600~~	$ 225,000	$ ~~1,106,400~~ 1,106,000
DEMOLITION			
Total bldgs	16	3	11
Residential	6	0	1
Non-residential	10 150,000	3 10,000	10 102,000
Cost range**	$88,941 - ~~152,469~~	$6035 - ~~10,344~~	$63,029 - ~~101,508~~
RELOCATION			
Tenant families	10	0	0
Owner families	0	0	1
Businesses	-	-	-
Total cost***			

*Cost of acquisition assumed to be total assessed valuation multiplied by 3.

**Demolition cost range figured as 7¢ to 12¢ per cubic foot of building space.

***Relocation costs estimated by rule of thumb;

Tenant families @ $3000 + 425 = 3425

Owner-occupant families @ $15,000 + 425 = 15,425

5853 025

BOSTON PUBLIC LIBRARY
3 9999 06315 555 8